Cumulative Index 1991

Volume 11

February	PHARMACOLOGIC MANAGEMENT OF THE DIFFICULT ALLERGIC PATIENT, pages 1–255
May	HUMAN CANCER IMMUNOLOGY II, pages 257–460
August	DRUG ALLERGY, pages 461–700
November	FOOD ALLERGY, pages 701–909

Note: Page numbers of article titles are in **boldface** type.

Acetaminophen, hepatitis induced by, 565–566
  pseudoallergic reactions, 670
Acetylsalicylic acid. See *Aspirin.*
Active specific immunotherapy for cancer, **401–423**
  clinical trials with defined preparations, 410–412
    blood group-related antigens Tn and sialylated Tn, 412
    gangliosides GM_2, GD_2, and 9–O-acetyl GD_3, 410–411
  experimental basis, 402–403
  human vaccination trials, 403–405
  recent innovations, 412–415
    adjuvants, 412–413
    anti-idiotype antibody vaccines, 414–415
    antigen processing, presentation, and recognition, 415
    T-cell help by antigen attachment to foreign proteins, 413–414
  tumor cell surface antigens, 405–410
    autologous typing, 406–407
    blood group-related antigens, 409–410
    human monoclonal antibodies, 407
    immunogenic melanoma antigens, 407–408
    serology, 405–406
Additives, pseudoallergic reactions, 673–674
  mixed, 674
  monosodium glutamate, 674
  sulfites, 673
Adenylate cyclase-linked receptors, 2
Adjuvants, in active specific immunotherapy, 412–413
Adoptive immunotherapy of cancer, **381–400**
  lymphokine-activated killer cells, 381–390
    biology of, 381–383
    clinical therapy, 385–390
    preclinical experience, 383–385
  tumor-infiltrating lymphocytes, 390–396
    biology of, 390–393
    future questions and prospects, 395–396
    preclinical experiments, 393–394
    therapy in humans, 394–395
beta-Adrenergic agents, agonists for allergy treatment, 5–8
  in elderly with heart disease and asthma, 192
  in pseudoallergic reactions, 640
  for urticaria, 55
Adsorption, of drugs, and hemolytic anemia, 538–539
  of protein, nonimmunologic, and hemolytic anemia, 540–541
Age, and drug hypersensitivity, 483
Airway inflammation, methotrexate therapy, 65–68
Allergies, pharmacologic management, **1–249**
  anaphylaxis, **117–141**
    clinical presentation, 118–120
    differential diagnosis, 121–123

Allergies *(Continued)*
etiology and pathophysiology, 123–128
management, 128–137
pathology, 120–121
anticholinergic treatment of nasal disorders, **31–44**
anticholinergic therapy, 36–43
nasal hyperreactivity, 34–35
normal anatomy and physiology, 31–34
asthma therapy, in athletes, **143–151**
complications, 149
definition, 143–144
diagnosis, 146
nondrug management, 148
Olympic experience, 149
pathogenesis, 144–145
pharmacologic management, 146–148
prevalence, 144
pulmonary functional changes, 145–146
gold, **81–90**
background, 82–84
oral gold, 85–89
parenteral salts, 84–85
methotrexate, **65–79**
airway inflammation, 65–68
future role of, 74
properties of, 68–74
new drugs, **233–249**
beta$_2$-agonist formulations, 242–243
azelastine hydrochloride, 236–238
bronchodilators formoteral and salmeterol, 239–240
inhaled glucocorticosteroids, 243–244
leukotriene antagonists, 244–245
nedocromil sodium, 235–236
other compounds, 245–247
in schools, **173–181**
absenteeism, 174–175
inhaled medications, 177
medication effects, 175–177
physical exercise, 178–179
poor school performance, 173–174
troleandomycin, **91–102**
in children, 99–100
and glucocorticoid pharmacokinetics, 94–95
guidelines, 97–99
present status and prospectus, 100
and theophylline clearance, 95–97
drug reactions, **213–231**
insulin allergy, 222–225
local anesthetics, 218–222
radiocontrast medium, 213–218
in elderly with heart disease, **183–199**
beta-adrenergic agonist bronchodilators, 185–191
asthma, 183–184
avoidance measures, 184
cardiac medications, 191–193
medications, 185
immunologic lung diseases, **201–212**
allergic bronchopulmonary aspergillosis, 204–209
Goodpasture's syndrome, 209–210
hypersensitivity pneumonitis, 201–204
sarcoidosis, 210–211
in inner city, **103–115**
insurance effects, 107–109
mortality from asthma, 111–113
poverty effects on health, 104–107
sociodemographic variables, 109–111
methotrexate, **65–79**
airway inflammation, 65–68
chrystotherapy, 66
cromolyn, 66
and multiple medical problems, **17–29**
antibiotics, 26–27
anti-inflammatory agents, 27–28
cardiovascular drugs, 25–26
drug interactions, 17–21
gastrointestinal drugs, 24–25
glaucoma, 27
neurologic drugs, 26
pharmacokinetics of antiallergy drugs, 23–24
pharmacologic basis, **1–15**
adrenergic agonists, 5–8
anticholinergics, 13–14
antihistamines, 3–5
cromolyn, 14–15
glucocorticoids, 10–12
methylxanthines, 8–10
stimulus-response coupling, 2–3
in pregnancy, **153–171**
general considerations, 154–157
specific medications, 157–164
treatment, 164–169
urticaria and angioedema, **45–63**
diagnosis, 46–48
histopathology of chronic idiopathic urticaria, 49–50
laboratory evaluation, 49
treatment, 50–56
p-Aminosalicylic acid, lung reactions, 579
Amiodarone, lung reactions, 576–577
Amoxicillin rashes, 616–617
Ampicillin, beta-lactam antibiotic allergy, 616–617
Analgesics, and contact dermatitis, 518
Anaphylaxis, **117–141**
in cow's milk allergy, 778
in elderly with heart disease and asthma, 191
etiology and pathophysiology, 123–128
and arachidonic acid metabolism, 126–127
idiopathic, 128
IgE-dependent, 123–125

immune complex-complement-mediated, 126
late phase IgE-mediated reactions, 125
mast cell-degranulating agents, 127
other mechanisms, 127–128
exercise-induced, 128, **757–766**
clinical features, 758–761
differential diagnosis, 761
new developments, 764–765
pathophysiology, 761–763
treatment, 763–764
food-induced, **743–755**
diagnosis, 748–749
fatalities, 749–750
immediate treatment, 750
individual allergens, 743–748
cross-allergenicity, 748
crustaceans, 746
fish, 745–746
milk, 746–747
peanut, 743–745
vegetable seed oils, 747–748
prevention, 750–752
beta-lactam antibiotic allergy, 615–616
management, 128–137
pathology, 120–121
in pregnancy, 168
treatment, 685–686
Anatomy, nasal, 31–34
Anemia, drug-induced immune hemolytic, 538–541
autoimmune mechanism, 540
drug adsorption mechanism, 538–539
immune complex mechanisms, 539–540
nonimmunologic adsorption of protein, 540–541
iron deficiency, in cow's milk allergy, 780
Anesthetics, as antigens and allergens, 219–220
and contact dermatitis, 516–518
local, allergic reactions, 218–222
patients at risk, 220–222
Angioedema, acetylsalicylic acid disease, 661
cutaneous manifestation of drug allergy, 496–497
beta-lactam antibiotic allergy, 616
See also *Urticaria and angioedema.*
Angiotensin-converting enzyme inhibitors, in cutaneous allergy, 503–504
in pseudoallergic reactions, 642–643
Animal models, anti-idiotypic antibodies in murine systems, 430–433
Antiarrhythmic drugs, lung reactions, 576–577
Antibiotics, in allergic patient, 26–27
contact dermatitis, 511–513
beta-lactams. See *beta-Lactam antibiotic allergy.*
lung reactions, 577–581
p-aminosalicylic acid, 579
nitrofurantoin, 577–579
penicillin, 579–580
sulfasalazine, 580–581
sulfonamides, 579
in pregnancy, 163
Antibodies, anti-idiotypic. See *Idiotype-based strategies and cancer immunity.*
in assays of adverse food reactions, 851–857
and drug conjugates, for cancer therapy, **341–358**
in melanoma therapy, 342–344
perspectives, 353–355
problems and solutions, 344–353
chemotherapeutic drug requirements, 348–349
monoclonal antibody requirements, 345–348
optimal drug linkers, 349–353
chemically cleavable linkers, 350–351
enzymatically cleavable linkers, 351–353
and immunotoxins, 366–367
insulin, penicillamine-induced, 536
monoclonal, and complement as effector mechanism, 289–291
and protein toxins. See *Immunotoxins.*
as targeting vehicles for chemotherapeutic drugs, 345–348
See also *Monoclonal antibodies, unconjugated.*
radiolabeled. See *Radiolabeled antibodies for tumor targeting.*
tumor targeting with radiolabeled antibody, 327–329
Anticholinergics, for allergy treatment, 13–14
for nasal disorders, **31–44**
anticholinergic therapy, 36–43
nasal hyperreactivity, 34–35
normal anatomy and physiology, 31–34
Anticholinesterases, in pseudoallergic reactions, 641–642
Anticonvulsants, lung reactions, 584–585
carbamazepine, 585
phenytoin, 584–585
Antifungals, contact dermatitis to, 513
Antigen-antibody complexes, in food allergy, 707–708
in radiocontrast medium allergy, 216
Antigens, blood group-related, immunogenic, 409–410
Tn and sialylated Tn, 412
carcinoembryonic, in colorectal carcinoma, 312–313
covalent attachment to foreign carrier proteins, 413–414
high molecular weight, 317–319
ingested, normal immune response, 705

Antigens *(Continued)*
in insulin allergy, 222–223
local anesthetics, 219–220
modulation, in complement attack, 282–283
P97 melanoma-associated, 315–317
processing, presentation, and recognition, 415
tumor cell surface, 405–410
Antihistamines, for allergy treatment, 3–5
in pregnancy, 158
for urticaria, 50–53
Anti-inflammatory agents, in allergic patient, 27–28
Antirheumatic drugs, lung reactions, 586–588
gold, 586–587
NSAIDs, 587–588
penicillamine, 588
Arachidonic acid metabolism, and anaphylaxis, 126–127
Aspergillosis, allergic bronchopulmonary, 204–209
Aspirin, in elderly with heart disease and asthma, 192–193
pseudoallergic reactions, 659–669
clinical features, 660–661
cutaneous disease, 662
desensitization, 666–669
diagnostic tests, 665
disease concept, 660
mechanisms, 662–665
oral challenge, 665–666
respiratory disease, 661–662
Assays, in vitro, of adverse food reactions, **851–862**
antibody assays, 851–857
IgE assays, 851–855
IgG and precipitating antibody assays, 855–857
immune complex assays, 857
lymphocyte proliferation assays, 858–860
mediator assays, 857–858
histamine, 857–858
histamine releasing assays, 858
tryptase assays, 858
Asthma, and acetylsalicylic acid disease, 660–661
desensitization, 666–668
oral challenge, 665–666
in athletes. See *Athletes with asthma.*
bronchodilators, new formulations, 239–243
in elderly with heart disease, **183–199**
avoidance measures, 184
medications, asthma, 185
bronchodilators, 185–191
cardiac, 191–193
gold therapy, **81–90**
background, 82–84
oral, 85–89
parenteral salts, 84–85
inhaled glucocorticosteroids, 243–244
in inner city. See *Inner city, asthma in.*
leukotriene antagonists, 244–245
methotrexate therapy, **65–79**
airway inflammation, 65–68
chrysotherapy, 66
corticosteroids, 66
cromolyn, 66
cytotoxics, 67
low dosage, 67–68
future role, 74
properties of, 68–74
mechanism of action, 73–74
pharmacokinetics, 68–70
toxicity, 70–73
mortality in inner city, 111–113
new drugs, **233–249**
azelastine hydrochloride, 236–238
nedocromil sodium, 245–246
in pregnancy, 166–167
in schools, **173–181**
absenteeism, 174–175
medications, 175–177
corticosteroids, 176–177
inhaled, 177
theophylline, 175–176
physical exercise, 178–179
poor school performance, 173–174
sociodemographic variables, 109–111
and tartrazine, 671–672
troleandomycin, **91–102**
in children, 99–100
and glucocorticoid pharmacokinetics, 94–95
guidelines, 97–99
present status and prospectus, 100
and theophylline clearance, 95–97
Athletes with asthma, **143–151**
complications, 149
definition, 143–144
diagnosis, 146
nondrug management, 148
Olympic experience, 149
pharmacologic management, 146–148
prevalence, 144
pulmonary functional changes, 145–146
Atopic dermatitis, in pregnancy, 168
Autoimmune and hematologic disorders, drug-induced, **525–553**
hemolytic anemia, 538–541
mechanisms, 540
lupus erythematosus, 525–533
neutropenia, 542–545
penicillamine-induced syndromes, 533–538
thrombocytopenia, 541–542
Autonomic drugs, in pseudoallergic reactions, 640–642

Avoidance measures, in elderly with heart disease and asthma, 184
in hypersensitivity pneumonitis, 202–203
Azelastine hydrochloride, 236–238
Azo and nonazo dyes, 671–673

Bacterial toxins, 360
Basophil histamine release, IgE detection, 604
Behavior, hyperkinetic, and food allergy, 863–864
Bleomycin, lung reactions, 581–582
Blood-borne malignancies, and immunotoxins, 365
Blood group antigens, immunogenic, 409–410
Tn and sialylated Tn, 412
Blood tests, in cow's milk allergy, 730–731
Bone marrow, allogeneic purging, 361–364
autologous transplantation, 364–365
Breast carcinoma, tumor targeting with radiolabeled antibody, 323
Breast feeding, and IgE-mediated cow's milk allergy, 726–727
Bronchodilators, beta-adrenergic agonist, 185–191
allergen immunotherapy, 190
anaphylaxis, 191
benefits and risks, 187
cardiovascular effects, 185–186
corticosteroids, 189
hypokalemia, 187
inhaled beta-agonists, 186
inhaled medications, 188–189
methylxanthines, 187–188
multiple drug regimens, 188
new drugs, 239–243
patient education and compliance, 189–190
beta-receptors, 186–187
sympathomimetic, in pregnancy, 159–162

CA19–9, in colorectal carcinoma, 314
Calcium channel blockers, in cutaneous allergy, 503–504
Cancer immunology, **257–456**
active specific immunotherapy, **401–423**
clinical trials with defined antigenic preparations, 410–412
experimental basis, 402–403
human vaccination trials with undefined tumor preparations, 403–405
recent innovations, 412–415
tumor cell surface antigens, 405–410
adoptive immunotherapy, **381–400**
lymphokine-activated killer, 381–390
tumor-infiltrating lymphocytes, 390–396
antibody-drug conjugates, **341–358**
in melanoma treatment, 342–344
perspectives, 353–355
problems and solutions, 344–353
complement, **277–299**
antibody conjugates with cobra venom factor, 291–294
complement system, 277–281
effector mechanism with monoclonal antibodies, 289–291
mechanisms of resistance, 282–289
resistance of nucleated cells, 281–282
cytokines, **445–456**
hematopoietic growth factors, 446–449
interferons, 451–452
interleukins, 449–450
tumor necrosis factor, 450–451
idiotype-based strategies, **425–444**
active immunologic strategies, 428–430
classification of anti-idiotypic antibodies, 427–428
combined therapies, 438–439
concepts, 426–427
human clinical trials, 439–440
in human tumor systems, 433–435
in passive immunotherapy, 436–438
tumor immunity in murine systems, 430–433
immunotoxins, **359–380**
clinical trials, 361–371
future directions, 371–373
toxins and immunotoxins, 359–361
monoclonal antibodies, unconjugated, **257–275**
clinical trials in cancer patients, 261–266
future directions, 266–268
mechanisms of antitumor activity, 258–261
tumor targeting with radiolabeled antibody, **301–339**
antibodies, 327–329
breast carcinoma, 323
colorectal carcinoma, 312–315
lung carcinoma, 322–323
lymphoma and leukemia, 319–322
melanoma, 315–319
neuroblastoma, 325
ovarian carcinoma, 325
potential obstacles, 329–332
radiolabels, 325–327
Carbamazepine, lung reactions, 585
Carbapenems, 627
Carcinoembryonic antigen, in colorectal carcinoma, 312–313
Cardiac medication in elderly asthmatics, 191–193
beta-adrenergic blocking agents, 192
aspirin, 192–193

Cardiac medication in elderly asthmatics, *(Continued)*
diuretics, 191–192
Cardiovascular drugs, in allergic patient, 25–26
bronchodilators, 185–186
Cephalosporins, cross-reactivity with beta-lactams, 625–626
Challenge testing, 602, **843–850**
controversial tests, 848
inhalation food challenge, 848
oral food challenge, 843–848
limitations of, 847–848
open versus blind challenges, 845–847
Chemical structure of beta-lactam antibiotics, 619–621
Chemicals, man-made, and food poisoning, 820–822
Chemotherapeutic drugs. See *Antibody-drug conjugates.*
Children. See *Infants and children.*
Chlorpromamide, lung reactions, 589
Chlorpromazine, and cholestasis, 570
Cholestasis, acute, drug-induced, 569–570
chlorpromazine effects, 570
contraceptive steroid effects, 570
Cholinergic agonists, in pseudoallergic reactions, 641–642
Classification, of allergic drug reactions, 595–596
of anti-idiotypic antibodies, 427–428
of eosinophilic gastroenteritis, 802–804
and risk factors for drug allergy, **475–492**
generalized reactions, 476–481
autoimmune reactions, 481
fever, 480–481
mast cell mediated, 476–480
vasculitis, 481
organ system reactions, 481–482
cardiac, 482
renal, 481–482
risk factors, 482–488
drug-related factors, 487–488
molecular size and reactivity, 487–488
nonimmunologic pharmacologic reactivity, 488
other factors, 488
patient-related factors, 483–487
age and gender, 483
associated illness, 485–486
genetic factors, 483–485
previous drug administration, 486–487
Clearance, in drug interaction, 19–20
Cobra venom factor, antibody conjugates with complement, 291–294
Colic, in cow's milk allergy, 779
Colitis, in cow's milk allergy, 784–786
food-induced, 709
Colorectal carcinoma, tumor targeting with antibody, 312–315
CA19–9, 314
carcinoembryonic antigen, 312–313
17–IA, 314
72–kilodalton glycoprotein, 314–315
TAG-72, 313–314
Complement, **277–299**
antibody conjugates with cobra venom factor, 291–294
in contrast material reactions, 649–651
effector mechanism with monoclonal antibodies, 289–291
nucleated cell resistance, 281–282
mechanisms of, 282–289
antigenic modulation, 282–283
cleavage of surface-bound C3b, 286–289
lipid composition and lipid synthesis, 283
MAC removal from plasma membrane, 284–286
in pseudoallergic reactions, 639–640
and radiocontrast medium, 213–214
system overview, 277–281
Compliance, elderly asthmatics with heart disease, 189–190
Conjugation of drugs, to cell membranes, 465–466
to soluble proteins, 464–465
Contact dermatitis, **509–523**
allergic, 500–501
analgesics, 518
anesthetics, 516–518
antibiotics, 511–513
alternatives, 512–513
neomycin, 511–512
other antibiotics, 512
antifungals, 513
corticosteroids, 519
irritant versus allergic, 510
preservatives, 513–515
propylene glycol, 515–516
risk groups, 511
sunscreens, 518–519
systemic medications, 520
thimerosal (Merthiolate), 515
transdermal drug delivery systems, 516
Contraceptive steroid-induced cholestasis, 570
Contrast media, radiographic, **645–657**
chemistry, 646–647
IgE role, 648
other determinants, 651–653
pathogenesis of reactions, 647–648
pretreatment, 653
protein cascades, 649–651
complement system, 649–651
plasma contact system, 649–651
reactions to, 647

Corticosteroids, and contact dermatitis, 519
in elderly with heart disease and asthma, 189
in pregnancy, 162–163
and school performance, 176–177
for urticaria, 54–55
Coumadin, cutaneous manifestations of allergy, 501–503
Cow's milk, IgE-mediated allergy reactions, **717–741**
breast-feeding, 726–727
cutaneous, respiratory, gastrointestinal manifestations, 719–720
exposure to small amounts of allergen, 726
intrauterine sensitization, 726
management, 730–736
formulas, cow's milk protein hydrolysate, 733–735
soy protein, 735–736
history, skin testing, blood tests, oral challenge, 730–731
medications, 731
prevention of sensitization to cow's milk, 731–732
protein avoidance, 732–733
modern historical descriptions, 717–719
in newborn nurseries, 727–729
IgG4, 727–729
pathogenesis, 725
heredity, 725
prevalence, 719
prognosis, 736–737
proteins in cow's milk, 729–730
spectrum of, 722–725
types of allergy, 721–722
protein intolerance and allergy, **773–797**
anaphylaxis, 778
colic, 779
dermatology, 780
etiology, 773–775
gastrointestinal aspects, 780–787
colitis, 784–786
diarrhea and small intestinal lesions, 781–783
eosinophilic gastroenteropathy, 783–784
inflammatory bowel disease, 787
oral, 780–781
vomiting and gastroesophageal reflux, 781
immunologic reactions, 775–777
incidence, 773
iron deficiency anemia, 780
multiple food allergies, 787–788
other related diseases, 780
prognosis, 788–789
pulmonary disease, 779
sleep disturbances, 779
symptoms, 778
treatment, 788
upper respiratory symptoms, 778–789
Cromolyn, for allergy treatment, 14–15
lung reactions, 588
Crustaceans, in food-induced anaphylaxis, 746
Cutaneous disease, acetylsalicylic acid, 662
Cutaneous manifestations of drug allergy, **493–507**
morphologic species of drug eruption, 495–501
allergic contact dermatitis, 500–501
drug exanthem, 495
erythema multiforme and toxic epidermal necrolysis, 498–499
fixed drug eruption, 499–500
photoallergy, 501
serum sickness, 497–498
urticaria and angioedema, 496–497
selected drugs, 501–505
angiotensin-converting enzyme inhibitors, 503–504
calcium-channel blockers, 503–504
heparin, coumadin, and streptokinase, 501–503
Lasix, 503–504
sulfonamides, 504–505
Cyclooxygenase, pseudoallergic reactions, 670–671
Cystic fibrosis, and allergic bronchopulmonary aspergillosis, 209
Cytokines, **445–456**
hematopoietic growth factors, 446–449
interferons, 451–452
interleukins, 449–450
tumor necrosis factor, 450–451
Cytopenias, immune-mediated, beta-lactam antibiotic allergy, 617
penicillamine-induced, 536
Cytotoxic agents, lung reactions, 581–584
bleomycin, 581–582
methotrexate, 582–583
procarbazine, 583–584
Cytotoxic testing, in food allergy, 871–872

Decongestants, sympathomimetic, in pregnancy, 159
Dermatitis herpetiformis, 711
Dermatomyositis, penicillamine-induced, 534
Desensitization to beta-lactams, 628
Detoxification of drugs, by liver, 558–561
Diarrhea, in cow's milk allergy, 781–783
Diet, and migraine headache, 832–833
Dimers, and drug sensitization, 466–467
Diuretics, in elderly with heart disease and asthma, 191–192
DNA recombinant methodology, 372–373

Doxepin, for urticaria, 53–54
Drug allergy, **213–231, 461–694**
autoimmune and hematologic disorders, **525–553**
hemolytic anemia, immune, 538–541
lupus erythematosus, 525–533
neutropenia, 542–545
penicillamine-induced syndromes, 533–538
thrombocytopenia, immune, 541–542
beta-lactam antibiotics, **611–633**
chemical structure, 619–621
cross-reactivity with penicillin, 625–627
desensitization, 628
incidence and frequency, 611–612
predisposing factors, 612–615
readministration to patient with past allergic reaction, 621–623
skin testing, 624, 627–628
specific types of allergic reactions, 615–619
classification and risk factors, **475–492**
generalized reactions, 476–481
organ system reactions, 481–482
risk factors, 482–488
contact dermatitis, **509–523**
analgesics, 518
anesthetics, 516–518
antibiotics, 511–513
antifungals, 513
corticosteroids, 519
irritant versus allergic, 510
preservatives and components, 513–516
risk groups, 511
sunscreens, 518–519
systemic medicaments, 520
transdermal drug delivery systems, 516
cutaneous manifestations, **493–507**
morphologic species of drug eruption, 495–501
selected drugs, 501–505
drug hypersensitivity, **461–474**
allergic and pseudoallergic reactions, 469–472
mechanisms of sensitization, 462–469
hypersensitivity reactions in lung, **575–594**
antiarrhythmics, 576–577
antibiotics, 577–581
anticonvulsants, 584–585
antirheumatic drugs, 586–588
cytotoxic agents, 581–584
miscellaneous drugs, 588–590
insulin allergy, 222–225
liver injury, **555–574**
cholestasis, acute, 569–570
chronic liver disease, 570–571
clinicopathologic patterns, 564–569
mechanisms, 561–563
overview, 555
patient-related determinants, 555–557
target for drug-induced injury, 557–558
toxification and detoxification, 558–561
local anesthetics, 218–222
prevention and treatment, **679–694**
anaphylaxis, 685–686
historical evaluation, 679–683
reintroduction of drugs, 686–692
treatment, 683–684
pseudoallergic reactions, **635–644, 659–678**
additives, 673–674
aspirin, 659–669
autonomic drugs, 640–642
azo, nonazo dyes, and additives, 671–673
enzyme inhibitors, 642–643
mediator releasers and activators, 635–640
nonsteroidal antiinflammatory drugs, 669–670
weak inhibitors of cyclooxygenase, 670–671
radiographic contrast media, 213–218, **645–657**
chemistry, 646–647
IgE effects, 648
other determinants, 651–653
pathogenesis, 647–648
perspective, 645–646
pretreatment, 653
protein cascades, 649–651
reactions, 647
in vivo and in vitro diagnosis, **595–610**
antigenic properties of allergenic drugs, 597–598
classification, 595–596
lymphocyte transformation, 605–606
patient evaluation, 596–597
in vitro methods, 602–605
in vivo methods, 598–602
Drug interactions, general principles, 17–21
clearance, 19–20
hepatic extraction, 21
pharmacokinetic, 18–19
protein binding, 19
time course, 20–21
troleandomycin, and glucocorticoids, 94–95
and theophylline, 95–97

Education, elderly asthmatics with heart disease, 189–190
Elderly, asthma with heart disease. See *Asthma, in elderly with heart disease.*
Enterocolitis, food protein-induced, 708–709
Enuresis, and food allergy, 867

Eosinophilia, beta-lactam antibiotic allergy, 618
Eosinophilic gastroenteritis, **799–813**
allergic, 711
to cow's milk, 783–784
classification, 802–804
clinical manifestations, 805–806
definition, 799
diagnosis, 807–808
epidemiology, 799–800
etiology, 800–802
eosinophil function, 802
laboratory findings, 806
pathology, 804
prognosis, 809
radiologic findings, 806–807
treatment, 808–809
Epidemiology, of eosinophilic gastroenteritis, 799–800
of oral allergy syndrome, 768
radiocontrast medium allergy, 213
Erythema multiforme, 498–499
Exercise, anaphylaxis, 119–120, 128
food-dependent. See *Anaphylaxis, exercise-induced.*
and asthma in school, 178–179
and bronchospasm. See *Athletes with asthma.*

Fatigue, and food allergy, 866–867
Fertility, and methotrexate treatment, 71
Fetus, drug effects, 154–155
Fever, in drug reactions, 480–481
beta-lactam antibiotic allergy, 618–619
Fish, in food-induced anaphylaxis, 745–746
Food allergy, **701–891**
anaphylaxis, exercise-induced, **757–766**
clinical features, 758–761
differential diagnosis, 761
new developments, 764–765
pathophysiology, 761–763
treatment, 763–764
food-induced, **743–755**
diagnosis, 748–749
fatalities, 749–750
immediate treatment, 750
individual food allergens, 743–748
prevention, 750–752
challenge testing, **843–850**
controversial tests, 848
inhalation food challenge, 848
oral food challenge, 843–848
cow's milk protein intolerance and allergy, **773–797**
anaphylaxis, 778
colic, 779
dermatology, 780
etiology, 773–775
gastrointestinal manifestations, 780–787
immunologic reactions, 775–777
incidence, 773
iron deficiency anemia, 789
multiple food allergies, 787–788
other related diseases, 780
prognosis, 788–789
pulmonary disease, 779
sleep disturbances, 779
symptoms, 778
treatment, 788
upper respiratory symptoms, 778–779
development in infants and children, **885–891**
clinical applications, 889
natural history and development, 886–889
controversial concepts, 863–869
techniques, 869–879
eosinophilic gastroenteritis, **799–813**
classification, 802–804
clinical manifestations, 805–806
definition, 799
diagnosis, 807–808
epidemiology, 799–800
etiology, 800–802
laboratory findings, 806
pathology, 804
prognosis, 809
radiologic findings, 806–807
treatment, 808–809
IgE-mediated allergic reactions to cow's milk, **717–741**
allergy types, 721–722
breast feeding, 726–727
cow's milk proteins, 729–730
cutaneous, respiratory, gastrointestinal manifestations, 719–720
exposure to small amounts of allergen, 726
intrauterine sensitization, 726
management, 730–736
modern historical descriptions, 717–719
in newborn nurseries, 727–729
pathogenesis, 725
prevalence, 719
prognosis, 736–737
spectrum of, 722–725
immunologic mechanisms, **701–716**
gastrointestinal barrier, 701–703
immunopathologic mechanisms, 706–708
normal immune response to ingested antigens, 705
oral tolerance development, 703–705
pathogenic factors, 708–712
migraine headache, **831–841**
conclusions and recommendations, 838–839
and diet, 832–833

Food allergy *(Continued)*
etiology, 832
pharmacologic triggering agents, 833–835
and nonimmunologic food reactions, **815–829**
metabolic reactions to food, 822–825
natural pharmacologic agents in food, 815–817
natural toxic agents, 817–820
poisoning by toxins, infectious agents, pollutants, or chemicals, 820–822
psychologic reactions, 825–826
oral allergy syndrome, **767–772**
allergic sensitization, 769
clinical presentation, 767–768
diagnosis, 768–769
epidemiology, 768
IgE role, 769–770
mechanisms of symptom development, 770–771
therapy, 771
in vitro assays, **851–862**
antibody assays, 851–857
lymphocyte proliferation assays, 858–860
mediator assays, 857–858
Formoteral, 239–240
Formulas, cow's milk protein hydrolysate, 733–735
soy protein, 735–736

Gangliosides GM_2, GD_2, and 9–O-acetyl GD_3, 410–411
Gastroesophageal reflux in cow's milk allergy, 781
Gastrointestinal drugs, in allergic patient, 24–25
Gastrointestinal tract, barrier in food allergy, 701–703
in cow's milk allergy. See *Cow's milk.*
in food allergy development, 888–889
in IgE-mediated cow's milk allergy, 719–720
Gender, and and drug hypersensitivity, 483
Genetics, of drug hypersensitivity, 483–485
of immune response to drugs, 468–469
Glaucoma, in allergic patient, 27
Glomerulonephritis, membranous, penicillamine-induced, 535
Glucocorticoids, for allergy treatment, 10–12
inhaled, 243–244
receptors, 3
and troleandomycin interaction, 94–95
Gluten-sensitive enteropathy, 710–711
Glycoprotein, 72–kilodalton, in colorectal carcinoma, 314–315

Gold therapy, for asthma, **81–90**
background, 82–84
oral, 85–89
parenteral salts, 84–85
lung reactions, 586–587
Goodpasture's syndrome, 209–210
penicillamine-induced, 535
Growth, monoclonal antibody effects, 260
Growth factors, hematopoietic, 446–449

Halothane-induced hepatitis, 568–569
Headache, and food allergy, 865–866
migraine. See *Migraine headache.*
Heart, drug hypersensitivity reactions, 482
Hematologic disorders. See *Autoimmune and hematologic disorders.*
Hematology, methotrexate toxicity, 71
Hematopoietic growth factors, 446–449
erythropoietin, 448–449
granulocyte colony-stimulating factor, 448
granulocyte-macrophage colony-stimulating factor, 447–448
Heparin, cutaneous manifestations of drug allergy, 501–503
Hepatitis, drug-induced, acute, 564–549
by acetaminophen, 565–566
by halothane, 568–569
by phenytoin, 567–568
by sulfonamide, 566–567
Heredity of IgE-mediated cow's milk allergy, 725
High molecular weight antigen, 317–319
Histamine, assays for, 857–858
pseudoallergic reactions, 635–639
in radiocontrast medium allergy, in mast cells and basophils, 214–215
Hydrochlorothiazide, lung reactions, 588
Hydroxyzine, for urticaria, 52
Hyperkinetic behavior, and food allergy, 863–864
Hypersensitivity, antibody-dependent cytotoxic, 707
cell-mediated, in food allergy, 708
delayed-type, 601
to drugs, **461–474**
allergic and pseudoallergic reactions, 469–472
cellular-mediated reactions, 471–472
IgE-mediated immediate reactions, 469–470
IgG- and IgM-mediated reactions, 470–471
pseudoallergic reactions, 472
sensitization mechanisms, 462–469
chemical reactivity of drugs, derivatives, and metabolites, 462–464
conjugation to cell membranes, 465–466

conjugation to soluble proteins, 464–465
dimers and polymers, 466–467
genetic aspects of immune response, 468–469
immune response to drugs, 467–468
in lung. See *Lung, hypersensitivity reactions.*
pneumonitis, 201–204
Hypokalemia, in elderly with heart disease and asthma, 187

Idiotype-based strategies and cancer immunity, **425–444**
active immunologic strategies, 428–430
anti-idiotypic antibodies as vaccines, 428
regulatory idiotypic pathways, 429–430
anti-idiotypic antibodies, classification, 427–428
modulation in human tumor systems, 433–435
in passive immunotherapies, 436–438
tumor immunity in murine systems, 430–433
combined therapies, 438–439
concepts of idiotypy, 426–427
human clinical trials, 439–440
monoclonal antibody activity, 260–261
IgA, in vitro detection, 604–605
IgE, in allergic reactions to cow's milk. See *Cow's milk.*
in anaphylaxis, 123–125
antibodies, in food allergy, 706–707
assays of food antigens, 851–855
and contrast material reactions, 648
and immediate allergic reactions to drugs, 469–470
in oral allergy syndrome, 769–770
in vitro detection, basophil histamine release, 604
radioallergosorbent assay, 602–604
in vivo detection, skin test, 598–601
IgG, assays of food antigens, 855–857
and drug sensitization, 470–471
in vitro detection, 604–605
IgG4, antibodies, and food allergy, 876–879
in cow's milk allergy, 727–729
IgM, and drug sensitization, 470–471
in vitro detection, 604–605
Imipramine, lung reactions, 589
Immune complex assays, 857
and complement-mediated anaphylaxis, 126
in food allergy, 873–876
and hemolytic anemia, 539–540
beta-lactam antibiotic allergy, 617–618
Immune response to drugs, general rules of, 467–468
genetic aspects, 468–469
Immunologic mechanisms in food allergy, **701–716**
gastrointestinal barrier, 701–703
immunopathologic mechanisms, 706–708
type I: IgE-mediated reactions, 706–707
type II: antibody-dependent cytotoxic, 707
type III: antigen-antibody complexes, 707–708
type IV: cell-mediated, 708
normal immune response to ingested antigens, 705
oral tolerance development, 703–705
pathogenic factors, 708–712
colitis syndrome, food-induced, 709
dermatitis herpetiformis, 711
enterocolitis, food protein-induced, 708–709
eosinophilic gastroenteritis, allergic, 711
gluten-sensitive enteropathy, 710–711
malabsorption syndrome, food-induced, 709–710
pulmonary hemosiderosis, food-induced, 712
Immunologic reactions in cow's milk allergy, 775–777
Immunotherapy, for allergic bronchopulmonary aspergillosis, 208
in elderly with heart disease and asthma, 189
in pregnancy, 163–164
Immunotoxins, **359–380**
clinical trials, 361–371
bone marrow purging, 361–365
allogeneic, 361–364
autologous transplantation, 364–365
complications, 366–371
antibody selection, 366–367
immunogenicity, 370
pharmacokinetics and tumor localization, 367–370
toxicity, 370–371
systemic tumor treatment, 365–366
blood-borne malignancies, 365
compartmental therapy, 366
solid tumors, 366
future directions, 371–373
combined treatment modalities, 371
other ligand receptor systems, 371–372
recombinant DNA methodology, 372–373
and toxins, 359–361
bacterial, 360
plant, 360
Infants and children, asthmatic, troleandomycin treatment, 99–100

Infants and children *(Continued)*
food allergy development, **885–891**
clinical applications, 889
deficiency of metabolic steps and pathogenesis, 887–888
gastrointestinal absorption of intact protein and
polypeptide fragments, 888–889
Infectious agents, and food poisoning, 820–822
Inflammation, methotrexate therapy, 67
Inflammatory bowel disease, in cow's milk allergy, 787
Inflammatory mediators, and radiocontrast medium allergy, 216
Inhaled medications, beta-agonists, 186
glucocorticosteroids, 243–244
in schools, 177
steroids, for allergic bronchopulmonary aspergillosis, 208
Inner city, asthma in, **103–115**
insurance effects, 107–109
mortality, 111–113
poverty effects on health, 104–107
sociodemographic variables, 109–111
Insulin allergy, 222–225
antibodies, penicillamine-induced, 536
as antigen, 222–223
approach to patient, 223–225
incidence, 222
prevention and treatment, 690–692
Insurance, and inner city health, 107–109
Interferons, as effector molecules, 451–452
Interleukins, as effector molecules, 449–450
Intestine, small, lesions in cow's milk allergy, 781–783
Intrauterine sensitization, to cow's milk allergy, 726
In vivo and in vitro diagnosis of drug allergy, **595–610**
antigenic properties of allergenic drugs, 597–598
classification of allergic reactions, 595–596
lymphocyte transformation, 605–606
patient evaluation, 596–597
in vitro methods, 602–605
IgE detection: basophil histamine release, 604
radioallergosorbent assay, 602–604
IgG, IgM, and IgA detection, 604–605
in vivo methods, 598–602
delayed-type hypersensitivity, 601
IgE detection: skin test, 598–601
oral challenges, 602
patch test, 601–602
Iron deficiency anemia, in cow's milk allergy, 780

Kidney, hypersensitivity drug reactions, 481–482

beta-Lactam antibiotic allergy, **611–633**
administration based on skin tests, 627–628
chemical structure, 619–621
cross-reactivity with penicillin, 625–627
carbapenems and penicillins, 627
cephalosporins, 625–626
monobactams and penicillin, 626–627
treatment, 687–689
desensitization, 628
incidence and frequency, 611–612
predisposing factors, 612–615
readministration to patient with past allergy, 621–623
history, 621
other tests, 623
skin testing, 621–623
skin testing, to predict allergy, 624
specific types of reactions, 615–619
ampicillin-amoxicillin rashes, 616–617
anaphylaxis, 615–616
eosinophilia, 618
fever, 618–619
immune complex reactions, 617–618
immune-mediated cytopenias, 617
interstitial nephritis, 618
nonurticarial skin rashes, 616
urticaria and angioedema, 616
Lasix, cutaneous manifestations of allergy, 503–504
Leukemia, tumor targeting with radiolabeled antibody, 319–322
Leukotriene antagonists, 244–245
Ligand receptor systems, and immunotoxins, 371–372
Lipids of nucleated cells, in complement attack, 283
Liver, drug-induced injury, **555–574**
clinicopathologic patterns, 564–569
acetaminophen-induced hepatitis, 565–566
cholestasis, acute, 569–570
chronic liver disease, 570–571
halothane-induced hepatitis, 568–569
hepatitis, acute, 564–569
phenytoin-induced hepatitis, 567–568
sulfonamide-induced hepatitis, 566–567
extraction of drugs, 21
mechanisms, 561–563
idiosyncratic drug reactions, 562–563
intrinsic reactions, 561–562
methotrexate toxicity, 71–72
overview, 555
patient-related determinants, 555–557
target for drug-induced injury, 557–558
toxification and detoxification, 558–561
Lung, in asthmatic athlete, 145–146
carcinoma, tumor targeting with radiolabeled antibody, 322–323
immunologic diseases, **201–212**

allergic bronchopulmonary aspergillosis, 204–209
cystic fibrosis, 209
diagnosis, 204
immunotherapy, 208
inhaled steroids, 208
monitoring for disease activity, 206–208
prophylaxis, 208–209
surgery, 208
therapy, 205–206
Goodpasture's syndrome, 209–210
hypersensitivity reactions, **575–594**
antiarrhythmics, 576–577
antibiotics, 577–581
para-aminosalicylic acid, 579
nitrofurantoin, 577–579
penicillin, 579–580
sulfasalazine, 580–581
sulfonamides, 579
anticonvulsants, 584–585
carbamazepine, 585
phenytoin, 584–585
antirheumatic drugs, 586–588
gold, 586–587
nonsteroidal antiinflammatory drugs, 587–588
penicillamine, 588
chlorpromamide, 589
cromolyn sodium, 588
cytotoxic agents, 581–584
bleomycin, 581–582
methotrexate, 582–583
procarbazine, 583–584
hydrochlorothiazide, 588
imipramine, 589
mephenesin carbamate, 588–589
pneumonitis, 201–204
avoidance, 202–203
therapy, 203–204
tryptophan, 589–590
sarcoidosis, 210–211
methotrexate toxicity, 72–73
Lupus erythematosus, drug-induced, 525–533
acetylation, 530
beta-adrenergic receptor blockers, 532
anticonvulsants, 532
antihistone antibodies, 528–529
antinuclear antibodies, 527–528
clinical relevance of, 529–530
chlorpromazine effects, 531
clinical features, 526–527
epidemiology, 526
isoniazid effects, 531–532
laboratory tests, 527
mechanisms, 530–531
methyldopa effects, 533
penicillamine effects, 532–533
quinidine, 533
Lymphocyte proliferation assays, 858–860
Lymphocytes, transformation, 605–606
tumor-infiltrating. See *Tumor-infiltrating lymphocytes.*
Lymphokine-activated killer, biology of, 381–383
clinical therapy, 385–390
preclinical experience, 383–385
Lymphoma, tumor targeting with radiolabeled antibody, 319–322

MAC. See *Membrane attack complex.*
Malabsorption syndrome, food-induced, 709–710
Mammary gigantism, penicillamine-induced, 536
Mast cells, degranulating agents, and anaphylaxis, 127
in drug reactions, 476–480
Mediators, antagonist for urticaria, 56
assays, 857–858
releasers and activators, 635–640
Medical problems, and allergies, **17–29**
antibiotics, 26–27
anti-inflammatory agents, 27–28
cardiovascular drugs, 25–26
drug interaction principles, 17–21
clearance, 19–20
hepatic extraction, 21
pharmacokinetic, 18–19
protein binding, 19
time course of interactions, 20–21
gastrointestinal drugs, 24–25
glaucoma, 27
neurologic drugs, 26
pharmacokinetics of antiallergy drugs, 23–24
Medication for cow's milk allergy, 731
Melanoma, antibody-drug conjugates, 342–344
antigens, after immunization, 407–408
tumor targeting with radiolabeled antibody, 315–319
high molecular weight antigen, 317–319
P97 melanoma-associated antigen, 315–317
Membrane attack complex (MAC), in complement attack, 284–286
Membranes, cell, and drug conjugation, 465–466
Mephenesin carbamate, 588–589
Merthiolate, contact dermatitis to, 515
Metabolism, deficiency of key steps, in food allergy, 887–888
and food ingestion, 822–825
Methotrexate, lung reactions, 582–583
therapy in asthma. See *Asthma therapy.*

Methylxanthines, for allergy treatment, 8–10
in elderly with heart disease and asthma, 187–188
Migraine headache, **831–841**
conclusions and recommendations, 838–839
and diet, 832–833
etiology, 832
and food allergy, 835–838
pharmacologic triggering agents, 833–835
Milk, food-induced anaphylaxis, 746–747
See also *Cow's milk*.
Molecular size, and drug reactivity, 487–488
Monobactams, cross-reactivity with penicillin, 626–627
Monoclonal antibodies, unconjugated, **257–275**
clinical trials in cancer patients, 261–266
future directions, 266–268
mechanisms of antitumor activity, 258–261
anti-idiotypic monoclonal antibodies, 260–261
growth or regulation interference, 260
immune destruction of tumor cells, 258–260
Monosodium glutamate, pseudoallergic reactions, 674
Mortality, from asthma, in inner city, 111–113
in food-induced anaphylaxis, 749–750
Myasthenia gravis, penicillamine-induced, 533–534

Nasal disorders. See *Anticholinergics, for nasal disorders*.
Nedocromil sodium, 235–236
Neomycin, contact dermatitis, 511–512
Nephritis, interstitial, beta-lactam antibiotic allergy, 618
Neuroblastoma, tumor targeting with radiolabeled antibody, 325
Neurologic drugs, in allergic patient, 26
Neutropenia, drug-induced, 542–545
Newborn nurseries, cow's milk feeding, 727–729
Nitrofurantoin, lung reactions, 577–579
Nonimmunologic food reactions, **815–829**
food poisoning by toxins, infectious agents, pollutants, or chemicals, 820–822
metabolic reactions to food, 822–825
natural pharmacologic agents, 815–817
natural toxic agents, 817–820
psychologic reactions, 825–826
Nonsteroidal antiinflammatory drugs (NSAIDs), lung reactions, 587–588
pseudoallergic reactions, 669–670

Oils, vegetable seed, 747–748
Olympics, asthmatic athletes, 149
Oral allergy syndrome, **767–772**
allergic sensitization, 769
clinical presentation, 767–768
diagnosis, 768–769
epidemiology, 768
IgE role, 769–770
mechanism of symptom development, 770–771
therapy, 771
Oral challenge, in cow's milk allergy, 730–731
Oropharyngeal symptoms. See *Oral allergy syndrome*.
Ovarian carcinoma, tumor targeting with radiolabeled antibody, 325

P97 melanoma-associated antigen, 315–317
Patch tests, 601–602
Peanut, in food-induced anaphylaxis, 743–745
Pemphigus and pemphigoid, penicillamine-induced, 534–535
Penicillamine, autoimmune syndromes induced by, 533–538
cytopenias, 536
Goodpasture's syndrome, 535
insulin antibodies, 536
mammary gigantism, 536
mechanisms, 536–538
membranous glomerulonephritis, 535
myasthenia gravis, 533–534
pemphigus and pemphigoid, 534–535
polymyositis and dermatomyositis, 534
pulmonary disorders, 536
lung reactions, 588
Penicillin, cross-reactivity with other beta-lactam antibiotics, 625–627
lung reactions, 579–580
treatment, 687–689
Pharmacokinetics, of adrenergic agonists, 6–7
of antiallergy drugs, 23–24
of anticholinergics, 13
of antihistamines, 4
of cromolyn, 14
of glucocorticoids, 11–12
of immunotoxins, 367–370
of methotrexate, 68–70
of methylxanthines, 9
Pharmacologic agents in food, and migraine headache, 833–835
nonimmunologic reactions, 815–817

Pharmacology, treatment of allergic diseases, **1–15**
adrenergic agonists, 5–8
anticholinergics, 13–14
antihistamines, 3–5
cromolyn, 14–15
glucocorticoids, 10–12
methylxanthines, 8–10
stimulus-response coupling, 2–3
adenylate cyclase-linked receptors, 2
glucocorticoid receptors, 3
phospholipase C-linked receptors, 3
See also *Allergies, pharmacologic management.*
Phenytoini, and liver injury, 567–568
lung reactions, 584–585
Phospholipase C-linked receptors, 3
Photoallergy, 501
Physiology, nasal, 31–34
Plant toxins, 360
Pneumonitis, hypersensitivity, 201–204
Pollens and food allergy, 748
Pollutants, and food poisoning, 820–822
Polymers, and drug sensitization, 466–467
Polymyositis, penicillamine-induced, 534
Polypeptides, gastrointestinal absorption, 888–889
Poverty, and health, 104–107
Precipitating antibody assays, 855–857
Pregnancy, and allergy treatment, **153–171**
approach to patient, 157
drug effects on fetus, 154–155
maternal pharmacologic considerations, 155
medications, 157–164
antibiotics, 163
antihistamines, 158
bronchodilators, sympathomimetic, 159–162
corticosteroids, 162–163
decongestants, sympathomimetic, 159
immunotherapy, 163–164
theophylline, 162
risks of uncontrolled disease, 156–157
sources of information, 155–156
treatment, 164–169
allergic rhinitis, 167–168
anaphylaxis, 168
asthma, 166–167
atopic dermatitis, 168
urticaria and angioedema, 168–169
Preservatives, and contact dermatitis, 513–515
Procarbazine, lung reactions, 583–584
Prophylaxis for allergic bronchopulmonary aspergillosis, 208–209
Propylene glycol, contact dermatitis to, 515–516
Proteins, binding in drug interactions, 19
cascades, in contrast material reactions, 649–651
in cow's milk, 729–730
avoidance of, 732–733
gastrointestinal absorption, 888–889
soluble, conjugation of drugs, 464–465
Provocation and neutralization, subcutaneous and intracutaneous, 869–870
sublingual, 870–871
Pseudoallergic reactions to drugs, 472, **635–644, 659–678**
angiotensin converting enzyme inhibitors, 642–643
aspirin, 659–669
autonomic drugs, 640–642
beta-adrenergic blockers, 640–641
cholinergic agonists and anticholinesterases, 641–642
other antihypertensive drugs, 641
azo, nonazo dyes, and additives, 671–674
mediator releasers and activators, 635–640
complement activation, 639–640
histamine release, 635–639
nonsteroidal antiinflammatory drugs, 669–670
weak inhibitors of cyclooxygenase, 670–671
Psychologic reactions to food, 825–826
Pulmonary disease, in cow's milk allergy, 779
food-induced hemosiderosis, 712
penicillamine-induced, 536

Radioallergosorbent assay of IgE, 602–604
Radiocontrast medium, allergic reactions, 213–218
epidemiology, 213
pathogenesis, 213–216
antigen-antibody interaction, 216
complement activation, 213–214
histamine release from mast cells and basophils, 214–215
inflammatory mediators, 216
patients at risk, 216–218
Radiolabeled antibodies for tumor targeting, **301–339**
antibodies, 327–329
breast carcinoma, 323
colorectal carcinoma, 312–315
CA19–9, 314
carcinoembryonic antigen, 312–313
17–1A, 314
72–kilodalton glycoprotein, 314–315
TAG-72, 313–314
lung carcinoma, 322–323
lymphoma and leukemia, 319–322
melanoma, 315–319

Radiolabeled antibodies for tumor targeting, *(Continued)*
high molecular weight antigen, 317–319
P97 melanoma-associated antigen, 315–317
neuroblastoma, 325
ovarian carcinoma, 325
potential obstacles, 329–332
radiolabels, 325–327
Radiology of eosinophilic gastroenteritis, 806–807
Rashes, beta-lactam antibiotic allergy, 616–617
Receptors, adenylate cyclase-linked, 2
glucocorticoid, 3
phospholipase C-linked, 3
beta-adrenergic agonist bronchodilators, 186–187
Respiratory disease, acetylsalicylic acid, 661–662
in cow's milk allergy, 778–789
in IgE-mediated cow's milk allergy, 719–720
Rheumatoid arthritis, and food allergy, 867–869
Rhinitis, allergic, in pregnancy, 167–168
Risk factors, for contact dermatitis, 511
drug-induced liver injury, 555–557
See also *Classification and risk factors for drug allergy.*

Salmeterol, 239–241
Salsalate, 670–671
Sarcoidosis, 210–211
Schools, asthma in. See *Asthma therapy, in schools.*
Sensitization, to cow's milk, prevention of, 731–732
intrauterine, to cow's milk allergy, 726
in oral allergy syndrome, 769
See also *Hypersensitivity to drugs.*
Serum sickness, cutaneous manifestations of drug allergy, 497–498
Skin, in cow's milk allergy, 780
in IgE-mediated cow's milk allergy, 719–720
testing, in cow's milk allergy, 730–731
beta-lactam antibiotic allergy, 621–623, 627–628
nonpenicillins, 624
IgE detection, 598–601
Sleep disturbances, in cow's milk allergy, 779
Soy protein formulas, 735–736
Streptokinase, cutaneous manifestations of allergy, 501–503
Sugar allergy, 864–865
Sulfasalazine, lung reactions, 580–581
Sulfites, pseudoallergic reactions, 673
Sulfonamides, cutaneous manifestations of allergy, 504–505
and liver injury, 566–567
lung reactions, 579
treatment, 689–690
Sunscreens, and contact dermatitis, 518–519
Surface, cellular, C3b cleavage, 287–289
Surgery for allergic bronchopulmonary aspergillosis, 208

T cells in active specific immunotherapy, 413–414
TAG-72, in colorectal carcinoma, 313–314
Target cells, therapeutic, of adrenergic agonists, 7–8
of anticholinergics, 14
of antihistamines, 4–5
of cromolyn, 15
of glucocorticoids, 12
of methylxanthines, 10
Tartrazine, and asthma, 671–672
and urticaria, 672–673
Tension-fatigue syndrome, allergic, 866
Theophylline, clearance, troleandomycin effects, 95–97
in pregnancy, 162
and school performance, 175–176
Thimerosal, contact dermatitis to, 515
Thrombocytopenia, drug-induced immune, 541–542
Time course, of drug interactions, 20–21
Tolerance, and food allergy development, 888–889
oral, in food allergy, 703–705
Toxic epidermal necrolysis, 498–499
Toxicity, of foods, 817–720
of immunotoxins, 370–371
of methotrexate, 70–73
fertility and malignancy, 71
hematologic, 71
hepatic, 71–72
minor, 70–71
pulmonary, 72–73
Toxification of drugs, by liver, 558–561
Toxins, and immunotoxins, 359–361
bacterial, 360
plant, 360
microbial or algae, and food poisoning, 820–822
Transdermal drugs, and contact dermatitis, 516
Troleandomycin treatment of asthma, **91–102**
in children, 99–100
and glucocorticoid pharmacokinetics, 94–95
guidelines, 97–99

present status and prospectus, 100
and theophylline clearance, 95–97
Tryptase assays, 858
Tryptophan, lung reactions, 589–590
Tumor cells, immune destruction of, 258–260
Tumor necrosis factor, as effector molecule, 450–451
Tumor-infiltrating lymphocytes, 390–396
biology, 390–393
preclinical therapy, 393–394
therapy in humans, 394–395
future questions and prospects, 395–396

Urine, autologous injections, in food allergy, 872–873
Urticaria, acetylsalicylic acid disease, 661
desensitization, 669
oral challenge, 666
and angioedema, **45–63**
diagnosis, 46–48
histopathology, 49–50
laboratory evaluation, 49
in pregnancy, 168–169
treatment, 50–56
beta-adrenergic agents, 55
antihistamines, H_1-, 50–53
H_2-, 53
corticosteroids, 54–55
doxepin, 53–54
hydroxyzine, 52
mediator antagonist, 56
other choices, 52
cutaneous manifestation of drug allergy, 496–497
beta-lactam antibiotic allergy, 616
and tartrazine, 672–673

Vaccines, in active specific immunotherapy, 403–405
anti-idiotype antibody, 414–415, 428
Vasculitis, in drug reactions, 481
Vegetable seed oils, in food-induced anaphylaxis, 747–748
Vomiting, in cow's milk allergy, 781